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EVALUATION OF THE DIVISION OF SECURITIES

INVESTOR EDUCATION SEMINARS

by

KristiLyn Jensen Wilkinson

A thesis submitted in partial fulfillment  
of the requirements for the degree

of

MASTER OF SCIENCE

in

Family, Consumer, and Human Development

Approved:

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Jean M. Lown  
Major Professor

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Vice President for Research and Dean of  
the School of Graduate Studies

UTAH STATE UNIVERSITY  
Logan, Utah

2013

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**ABSTRACT**

Evaluation of the Utah Division of Securities

Investor Education Seminars

by

KristiLyn Wilkinson, Master of Science

Utah State University, 2013

Major Professor: Dr. Jean M. Lown

Department: Family, Consumer, and Human Development

It is important that consumers are not only financially literate, but that they are also capable of making prudent financial decisions. Effective financial education programs should empower individuals to make wise financial decisions and avoid financial scams. The purpose of this study was to evaluate the effectiveness of the Investor Education Seminars taught by the Utah Division of Securities. The effectiveness of the educational program was measured by changes in financial knowledge, confidence, attitudes, and behavior compared to individuals who did not participate in the course. A logic model was used to outline program objectives and to determine the research questions.

Data for this study were collected from participants through three online questionnaires. A comparison group, who had not yet attended the Investor Education Seminars, was asked to answer the same three surveys. Initially, there were 81 respondents in this study, 46 seminar participants, and 35 comparison group participants.

Results from chi-square crosstabulations showed that age, ethnicity, and employment status were the only significant group differences between seminar participants and the comparison group.

The results of this study suggest that the Investor Education Seminars were beneficial in helping participants increase their financial confidence and progress to a higher stage in the Transtheoretical Model of Change (TTM). Hierarchical regression analyses found a significant increase from pretest to posttest in financial confidence for seminar participants. Although there was no significant change in financial knowledge from pretest to posttest for the treatment group, the knowledge scores were high on the pretest. The average financial attitude score decreased for the treatment group. Results for the Transtheoretical Model for Change (TTM) showed that many participants in the treatment group moved from struggler to saver in the Stages of Change. The majority of participants reported being satisfied with the seminar and would recommend it to others.

(99 pages)

## **PUBLIC ABSTRACT**

Evaluation of the Utah Division of Securities

Investor Education Seminars

by

KristiLyn Wilkinson, Master of Science

Utah State University, 2013

Major Professor: Dr. Jean M. Lown

Department: Family, Consumer, and Human Development

The Investor Education Seminars are taught by the Utah Division of Securities to educate consumers and make them more aware of investment fraud. This research study evaluated the seminar in order to assess the effectiveness of the four classes in helping consumers achieve financial capability. A logic model was used to outline program objectives and to determine the research questions.

Individuals who registered for the seminars were invited to complete three surveys for this study: a pretest, posttest, and three-month follow-up survey. A comparison group that had not yet attended the Investor Education Seminars was asked to complete the same three surveys. Initially, there were 81 respondents in this survey, 46 seminar participants and 35 non-participants. Overall, the results from this program evaluation were positive, and while changes may be made to improve the effectiveness of the seminars, participants reported that they were satisfied with the series and would recommend the seminars to others in the future.

The Transtheoretical Model of Change (TTM) is a theory that describes the process individuals go through to make positive behavior changes. There are five stages that individuals progress through, and many participants in the treatment group progressed from struggler on the pretest to saver on the posttest.

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I am sincerely grateful to my wonderful parents for their love and support throughout my life. They have always placed a high value on education, and my father has sacrificed all his life so that my sisters and I could have the best education possible. Through all the late night tears, anxiety, and stress, they never stopped believing in me. I am the person that I am today because of their influence and constant encouragement.

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KristiLyn Jensen Wilkinson

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# **CHAPTER 1**

## **INTRODUCTION**

Recently, there has been increased recognition of the need for financial education in the United States. According to O'Connell (2008) policymakers are concerned about financial literacy because many Americans are having difficulty with their financial responsibilities. The President's Advisory Council on Financial Literacy was formed in 2008 to improve the level of financial literacy of Americans (Executive Order no. 13455). The global financial crisis and its aftermath led to the worst recession since the Great Depression (Hilsenrath & Dougherty, 2011). There is concern that continued high unemployment and financial stress could cause people to become desperate and more susceptible to investment fraud. In addition to the erratic economy, many new and complicated financial products are so confusing that consumers are unsure where to turn for help and education (Financial Industry Regulatory Authority [FINRA], 2009). Although there is a plethora of information available on the internet about investments and investment vehicles, it is hard for consumers to judge if the information is accurate and reliable.

Much of the financial information available is provided through investing companies or brokers, who don't have a fiduciary responsibility to act in their clients' best interest. The products they sell must simply "suit" the client's needs, but may charge a high commission or fee (U.S. Securities & Exchange Commission, 2008). Without clear regulation standards for financial professionals, investment fraud continues to be a problem. Some of the biggest investment scams in the history of the United States

have occurred in the past few years, and Utah is no exception. A Utah resident recently swindled \$100 million dollars from Utah investors through a real estate Ponzi scheme (Ferguson, 2012). There are so many new and complicated financial products that people may be unfamiliar, or uncomfortable, with making financial decisions.

Financial education programs disseminate information, but whether or not they help consumers improve their financial decisions and practices is not clear (Collins & O'Rourke, 2010). Even with financial literacy education, there is a gap between what people *know* about money and what they actually *do* with their money (Lusardi, 2010). As a result, there is a shift in educators' focus from improving financial literacy to achieving financial capability (FINRA, 2009). Financial literacy implies that someone has knowledge about finances, whereas financial capability focuses on how individuals manage their resources and how they make financial decisions (FINRA, 2009).

The National Financial Capability Study (FINRA, 2009) concluded that increasing financial capability can affect Americans' financial security, well-being, and prosperity. A financially capable society can produce a more efficient market for financial products, greater asset accumulation, and increased financial stability (FINRA, 2009).

Despite the abundance of financial literacy programs, few studies have measured the effectiveness of these programs (O'Connell, 2008). Insufficient information is available about the impact that investor education has on promoting investing capability. A better understanding is needed of how effectively investor education enhances

investing capability so that educators and institutions can make improvements to their curricula and incorporate the most effective teaching strategies.

### **Need for Study**

The Utah Division of Securities (the Division) teaches classes to help educate citizens about the benefits and risks of investing (Investor Protection Trust, 2008). Evaluation of these classes is needed to help the Division determine if they are meeting their goal of improving investing capability. A program evaluation is needed to answer the question of whether the curriculum and method of presentation are effective in promoting financial capability for investors.

### **Conceptual Framework**

In order for educators and practitioners to help individuals achieve investing capability they need to understand the mechanism of behavior change. The Transtheoretical Model of Change (TTM) demonstrates how individuals progress through the stages of behavior change. The TTM has been found useful in psychotherapy disciplines, and it has been applied to financial counseling to influence financial behavior (Kerkmann, 1998).

The TTM was developed to analyze behavior change processes in health psychology related to smoking cessation and weight loss (Norcross, Krebs, & Prochaska, 2011). The TTM models the process by which individuals progress through five stages of change and how to change undesirable behavior. The stages of change represent *when*

people change, and the processes of change explain *how* people change (Norcross et al., 2011).

The five stages of change are: (1) precontemplation, (2) contemplation, (3) preparation, (4) action, and (5) maintenance (Norcross et al., 2011). In the *precontemplation* stage most individuals are unaware that they need to change and have no intention to change in the near future. Individuals in the *contemplation* stage are conscious of the problem behavior but do not have a plan for changing the behavior and are not likely to change in the next six months. Persons who are in the *preparation* stage intend to make changes within the coming month and are taking minor steps to reduce or change the problem behavior. During the *Action* stage people modify their behavior and environment to overcome problems. This stage takes the most time, commitment, and energy. Individuals are considered successful in this stage if they alter their behavior for a period of one to six months. In the *maintenance* stage individuals work to prevent relapse of their problematic behavior (Norcross et al., 2011). Developers of the TTM have since added *termination* as the sixth stage of change. In this stage individuals do not desire to revert back to their old habits (Prochaska & Velicer, 1997).

The key to helping individuals successfully change behavior is to recognize what stage the person is in and then implement strategies to help the client move forward (Xiao, 2008). Assessment of the stage of change is most feasible during one-on-one counseling sessions. However, group education may still facilitate positive behavior change. Educators need to understand what motivates people to change so that they can help them progress through this process. The purpose of financial education is not simply to convey



financial information, but to help individuals apply what they learn so that they can achieve financial capability.

### **Purpose of Study**

The purpose of this study is to evaluate the effectiveness of the Investor Education Seminars taught by the Utah Division of Securities. To do so, this study will measure participants' financial knowledge, satisfaction, confidence, attitudes, and behavior through a pretest, posttest, and a 3-month follow up survey. The Investor Education Seminar Series is offered to residents of Utah in order to help promote investing knowledge and to prevent investment fraud. This program evaluation was designed to provide feedback to the Division so that they can improve their financial education curriculum and presentation.

### **Research Questions**

Evaluation of the Investor Education Seminar is necessary to help the Division determine if they are meeting their goal of improving investor capability. The following research questions were used to evaluate the effectiveness of the Division in helping people make wise investing decisions.

1. How satisfied are participants with the Investor Education Seminars?
2. Does financial knowledge about investing increase more for those participants who attend the Investor Education Seminars than for a comparison group?
3. Does confidence in ability to invest increase more for participants who attend the Investor Education Seminars than for a comparison group?

4. Do financial attitudes improve more for participants who attend the Investor Education Seminar Series than for a comparison group?
5. Three months after completing the Investor Education Seminars, did participants report that financial behavior improved after taking the course?
6. Three months after completing the Investor Education Seminars, was participation in the seminars associated with more financial behavior change to a higher stage of change in the Transtheoretical Model for some participants? If so, for which participants?

### **Potential Benefits of the Study**

Evaluation is critical in the design and implementation of an educational program. The purpose of financial program evaluation is to improve future programs and measure the effectiveness of financial education on individuals (Bamberger, Rugh, & Mabry, 2012). This research benefits the Division by helping them improve the effectiveness of their seminars. Financial practitioners and educators may also benefit from this study because the results may lead to an improved curriculum and/or teaching strategies that more effectively address the needs and concerns of investors. The measures outlined in this study can be used to evaluate similar financial education programs.

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **Overview**

This literature review explores the effectiveness of financial education in improving participants' knowledge and behavior. Studies related to financial education are assessed to determine the overall impact of financial education on consumers. Studies applying the Transtheoretical Model of Change to financial behavior change are also discussed.

#### **Program Evaluation**

Financial education programs have the potential to help individuals obtain necessary knowledge and skills to make successful financial decisions. However, some financial programs focus on consumers gaining financial knowledge, but not necessarily achieving financial capability. Financial education that helps individuals change is likely to be more successful at creating long-term, beneficial changes. Program evaluation is necessary to help financial educators determine if their program is meeting the needs of participants and if they experience positive behavior change (National Endowment for Financial Education, 2010).

Although program evaluation is not always considered at the beginning of a program's development, it is most successful when goals and objectives are considered at the onset, and evaluation is incorporated into every stage of program design (Bamberger

et al., 2012; Hathaway & Khatiwada, 2008). Availability of time, resources, and money may make program evaluation difficult for some developers (Bamberger et al., 2012). It is important to define the program objectives and desired outcomes from the beginning so that coordinator bias does not influence the results (Bamberger et al., 2012).

### **NEFE Evaluation Manual**

One resource for educators is the *Financial Education Evaluation Manual* developed under the sponsorship of the National Endowment for Financial Education (NEFE). This manual was designed to help financial educators assess program outcomes. The NEFE manual provides information about the program evaluation process and how to collect, analyze, and summarize data. The five components to the NEFE evaluation model include: (1) needs assessment, (2) objectives, (3) program development, (4) program delivery, and (5) evaluation (NEFE, 2010).

### **Logic Model**

A logic model helps practitioners achieve program goals and objectives by providing a conceptual framework to guide the program. Logic models describe the program implementation process, analyze factors that affect implementation and outcomes, and help interpret findings to assess whether a program should continue (Bamberger et al., 2012). Logic models consist of three main components: (1) inputs, (2) outputs, and (3) impacts (NEFE, 2010). The *inputs* are the resources that are used to develop the program, (i.e., time and money). The *output* is the financial education program that is produced with the inputs. The *impacts* are the benefits obtained by participants as a result of the outputs (NEFE, 2010).

Logic models are used to define how a program intends to achieve its objectives (Bamberger et al., 2012). Logic models outline the intended or observed outcomes while linking resources and activities to the ultimate program goals. Following a logic model increases the credibility of evaluation results (Bamberger et al., 2012).

The use of a logic model helps to strengthen the construct validity of a study. Also, logic models help to define how a program is intended to achieve its objectives, test critical assumptions, and identify contextual factors that may affect program outcomes (Bamberger et al., 2012). One of the key assumptions in a logic model is that educational programs can potentially influence participants to change their behavior. This assumption can serve as a guide in determining the research questions and research design.

### **Transtheoretical Model and Stages of Financial Behavior Change**

The Transtheoretical Model of Change (TTM) was developed to explain how individuals progress through different stages of change when trying to prevent negative behavior or form a new positive behavior (Prochaska, DeClemente, & Norcross, 1992; Prochaska et al., 1994; Prochaska & Velicer, 1997). The TTM has been applied to financial education programs to examine their effectiveness (Kerkmann, 1998).

A study conducted by Xiao et al. (2004) applied the TTM to help consumers change their behaviors in order to eliminate credit card debt. Consumers experiencing debt problems were recruited to fill out a survey. Participants were then classified in one of the five TTM stages (*precontemplation, contemplation, preparation, action, and maintenance*) according to their responses in order to assess their readiness to change

their debt habits (Xiao et al., 2004). The researchers found that there are multiple stages involved in behavior change. They also concluded that consumers in the first three stages were comparable to each other, while individuals in the last two stages were also similar (Xiao et al., 2004).

The TTM was applied to the MONEY 2000 program to improve the financial well-being of participants through increased savings and/or reduced debt. The MONEY 2000 program was developed to appeal to people at different stages of readiness to change (Xiao et al., 2001). Survey responses were collected from a convenience sample of Money 2000 participants to assess each individual's readiness for behavior change. Participants were then categorized into four groups: pre-actor, saver, debt reducer, or saver and debt reducer (Xiao et al., 2001). Individuals who joined the program, but did not reach their goals, were considered in the preparation stage. Individuals who made progress towards saving more or reducing expenses were classified in the action stage, and participants who increased savings and decreased expenses for more than six months were considered to be in the maintenance stage (Xiao et al., 2001). The study found that MONEY 2000 helped individuals progress to a higher stage. Xiao et al. (2001) recommended the use of this theory in future studies to help educators develop more effective programs.

### **How Effective Are Financial Education Programs in Improving Financial Knowledge and Behavior?**

Evaluating financial education programs can be difficult for educators and researchers because there is no widely accepted evaluation process or guideline

(McCormick, 2009). Further, individuals who voluntarily attend financial education programs tend to be more motivated than those who do not participate (McCormick, 2009).

While there is no standard for financial education program evaluation, the literature suggests that financial education is necessary and that many programs appear to be effective (Martin, 2007). Financial education generally increases financial knowledge, but the ultimate goal of financial education is to help individuals improve their financial behavior in order to achieve financial capability. Based on a comprehensive review of the literature, Collins and O'Rourke (2010) concluded that financial education increases knowledge more than it promotes behavior change. Financial capability cannot be measured by merely looking at one indicator, (i.e., financial knowledge) because financial capability encompasses multiple behaviors such as how individuals manage their resources and how they make financial decisions (FINRA, 2009).

Several problems arise with financial education program evaluations. Research is often conducted by the educators or the developers of the curriculum, which can lead to biased results (Collins & O'Rourke, 2010). Many studies lack a comparison group and may not have an adequate follow-up time period to provide evidence of lasting impacts (Collins & O'Rourke, 2010). Even if significant findings emerge from the research, the results cannot always be generalized to other populations due to small sample sizes and specific populations used (Collins & O'Rourke, 2010).

A study by Agnew and Szykman (2005) found that self-reported measures can lead to overstatement of participants' financial knowledge. The financial capability study

conducted by FINRA (2009) found that participants gave themselves high scores when asked to rate their financial knowledge. However, when asked fundamental questions about economics, interest rates, inflation, risk, and diversification, the data revealed low levels of financial literacy among Americans. While financial knowledge is correlated with behavior that is indicative of financial capability, financial knowledge does not necessarily lead to a change in financial behavior (FINRA, 2009).

Zhan, Anderson, and Scott (2006) evaluated financial education programs for 10 non-profit agencies in Illinois. A pretest was administered immediately before the first class, and the posttest was administered after the final class. Participants answered 48 multiple choice and true/false financial knowledge questions. While this study showed improvements in knowledge, the research design did not measure changes in financial behavior. A similar study was conducted by Koenig (2007) who reported a 12% increase in financial knowledge; however, there were only 17 participants. Attrition continues to be an issue, and there is usually a difference between those who choose to seek financial education and those who do not (Collins & O'Rourke, 2010; McCormick, 2009).

Collins & O'Rourke (2010) examined fifteen financial education studies and found that eight of the studies examined impacts on behavior. While seven of the eight studies reported improvements in financial behavior, six of these studies lacked a comparison group. Only four of the 15 studies evaluated both knowledge and behavior (Collins & O'Rourke, 2010).

In 2007, the Federal Deposit Insurance Corporation evaluated the *Money Smart* curriculum, which is geared toward teaching adults, using a pretest, posttest, and 6-12



month follow-up design. Researchers found an increase in financial knowledge, but demographic information was not collected until the last survey, so the study was unable to determine if attrition rates varied by demographics (Federal Deposit Insurance Corporation, 2007).

Lyons, Chang, and Scherpf (2006; as cited in Collins & O'Rourke, 2010) evaluated a financial education program for low-income households using a retrospective pretest at the end of the last session. While 85% of respondents reported that the class helped improve their financial management behavior, the administration of the test presents a weakness in the data because the pre-test was delivered after the class (Collins & O'Rourke, 2010). Participation in the class is likely to have influenced respondents' perspectives on their behaviors prior to the course.

### **Summary**

Are financial education programs effective in improving financial knowledge and behavior? Based on previous research, the answer to this question remains ambiguous. The literature suggests that financial education produces positive changes in consumer financial knowledge and behavior (Haynes-Bordas, Kiss, & Yilmazar, 2008; Lyons, White, & Howard, 2008; Martin, 2007). However, there are many limitations that remain. It is possible that negative program evaluation results are less likely to be published and widely disseminated. Additionally, methodological problems make it difficult to accurately measure the extent of program impacts in many of the studies reviewed. The

lack of effective program evaluation is also a factor in why the outcomes of financial education are so unclear (Hathaway & Khatiwada, 2008).

### **CHAPTER III**

### **METHODOLOGY**

The purpose of this study was to evaluate the effectiveness of the Utah Division of Securities' Investor Education Seminars. Participant's knowledge, satisfaction, and confidence were measured to determine the effectiveness of the course. This study also measured participants' financial attitudes and behaviors three months after participating in the education and their movement through the TTM stages of change. The sample, design, variables, instrumentation, data analysis, data collection, timeline, and Institutional Review Board approval are discussed in this chapter. The logic model (Appendix A) demonstrates the anticipated inputs, outputs, and impacts of the course. It also illustrates assumptions and external factors that may have influenced the program outcomes.

#### **Investor Education Seminar**

The Investor Education Seminar was offered to residents of Cache County, Utah to help increase individuals' knowledge of investments and awareness of investment fraud. The course was taught in October of 2011, and the comparison group in Weber County, Utah received the education after the study was completed. The course was taught once a week for four weeks by employees of the Division. Topics included preparing to invest, investment risk, what makes stock prices rise and fall, myths and realities of financial planning, how to select a stockbroker or investment advisor, and signs of potential investment fraud.

### **Sample**

The convenience sample consisted of individuals who self-selected to attend the classes. To establish a comparison group, 800 email addresses were obtained from non-profit organizations in Weber County. It should be noted that persons who self-select to attend financial education classes are likely different than those who do not choose to participate. Participants are already motivated to make financial behavior changes, and may be in the *contemplation, action, or maintenance* stages of behavior change in the TTM.

When couples attended, one spouse was asked to complete all three surveys. Having only one spouse fill out the surveys provided consistency for data collection, and research has found that spouses influence the investing decisions of their partner (Yilmazer & Lyons, 2010). The instructions on how to fill out the survey, and the request that the same person in each household fill out all three surveys, was sent via email to all participants who registered for the seminars. Responses were tracked by email addresses.

### **Design**

The research design was a quasi-experimental, pretest, intervention, posttest, comparison group design (e.g.,  $O_1 X_1 O_2 O_3$ ). A quasi-experimental design was used because there was no random assignment to treatment or comparison group. To collect baseline data, the pretest was administered online via SurveyMonkey, a web-based survey service, prior to the first class. Pre and posttest surveys were evaluated to assess

changes in participants' knowledge and confidence towards investing. The posttest also measured participants' satisfaction with the course. The three-month follow-up survey measured financial attitudes and investing behavior change. The study design sought to control threats to internal validity so that improvements in participant behavior could more confidently be attributed to the Investor Education Seminars instead of extraneous variables.

History was a potential threat to this study because there could be other events external to the investing classes that could influence participants' knowledge, investing confidence, and behavior. A comparison group was used to control this threat. Because the comparison group was from another county in Utah, there were local differences between the two groups. The population of Cache County is 113,417; 85.5% of the population is White and 10.0% is Hispanic. Weber County has twice the population (232,228), 78.0% of which is White and 16.8% Hispanic. Weber County is also more urban than Cache County (U.S. Census Bureau, 2010).

Pretest sensitization was another threat to internal validity. Participants' responses to knowledge on the posttest may be a result of familiarity with the pretest. Pretest sensitization is a common threat to internal validity that must be addressed by using a comparison group. The comparison group made it possible to determine if scores improved between the pre and posttest for those who had not yet attended the class.

The potential unreliability of treatment implementation was a threat to statistical conclusion validity (Bamberger et al., 2012). To control for this threat, the treatment (Education Seminars) was delivered consistently to all participants; classes were taught

once a week for four weeks by Division personnel. When doing a pretest, posttest, comparison group design, it is important to have an adequate theory model (i.e., a logic model; see Appendix A), to control for threats to construct validity. Additionally, the logic model clearly defined and explained the basic objectives of the program.

## **Variables**

### **Dependent Variables**

The dependent variables of financial knowledge, satisfaction, confidence, attitude, and financial behavior change were used to determine the effectiveness of the investing seminars.

*Satisfaction* was measured with the question “How satisfied are participants with the investor education seminars?” using a 5-point Likert-type scale with 1 = I didn’t like it to 5 = Excellent. Four additional open-ended questions were used to assess participants’ views on the quality of the seminar.

*Knowledge* was assessed using two measures. The first measure was a self-rated question of individuals’ perceived investment knowledge. Response categories were: 1 = very poor, 2 = poor, 3 = fair, 4 = good, and 5 = excellent (NEFE, 2010).

The second measure was a 22-item financial investment quiz (shown in Appendix B) which consisted of true/false and multiple choice questions. Questions 12, 13, and 14 are three basic financial literacy questions that were part of the 2004, 2006, and 2008 Health and Retirement Survey (HRS) and have been used in many other surveys (Lusardi, 2010; Lusardi & Mitchell, 2009; Lusardi, Mitchell, & Curto, 2009). Questions 15 and 16 were *basic* financial literacy questions used in the Rand American Life Panel (ALP),

an online survey used to measure the financial knowledge of adults (Lusardi & Mitchell, 2009). Questions 17-21 came from the SEC “Test Your Money Smarts,” an interactive, online quiz for individuals to assess basic investing knowledge (U.S. Securities and Exchange Commission, 2008). Questions 22-33 on investing knowledge came from the Investor Education 2020 curriculum handbook (Investor Protection Trust, 2008).

Questions 34-41 collected demographic information on gender, age, marital status, employment status, education level, race or ethnicity, household income, and investment assets. The wording, categories, and ordering of these questions were based on previous research, including the 2009 National Financial Capability Survey (FINRA, 2009) and a previous study (Robb, 2010).

*Financial Confidence* was assessed using two measures. The first assessed respondents’ confidence in their ability to make basic investing decisions with five 5-point Likert-type scale questions with responses ranging from 1 = not at all confident to 5 = very confident. Question 7 comes from previous research (Robb, 2010) and the TIAA-CREF Higher Education Retirement Confidence Survey (TIAA-CREF Institute, 2010). The wording was changed to reflect investing rather than retirement topics: “Does confidence in ability to invest increase more for those participants who attend the Investor Education Seminars than for a comparison group?”

The second financial confidence measure was a 12-item self-efficacy scale that measured participant’s confidence in making financial decisions (Robb, 2010; Schwarzer, 2010). Cronbach’s alpha for the self-efficacy scale has been reported as .80 (Schwarzer,

2010). The Likert-type scale for responses ranged from 1 = exactly true to 4 = not at all true.

*Financial attitudes* were measured using the short version of the Financial Planning Personality Type (FPPT; Lown, 2007). The research question was: “Do financial attitudes improve more for participants who attend the Investor Education Seminars than for a comparison group?” The FPPT scale consisted of two questions: one with eight responses, the Retirement Personality Profile (RPP), and one with five responses (FPPT). According to previous research, these two summary questions can correctly predict the FPPT of individuals approximately 88% of the time compared to the original 15 questions (Lown, 2007). The FPPT was used to establish a baseline for attitudes in order to assess the participants’ stages of behavior change, based on the Transtheoretical Model, in research question six.

*Financial Behavior* was measured on the follow-up survey that asked respondents to state what actions they had taken since completing the investing seminars. Three months after completing the Investor Education Seminars participants responded to the question, “Does financial behavior improve for participants who attended the course?” by stating whether they had started to set specific investing goals, reviewed or revised their investing goals, and/or calculated the amount of money needed for a specific goal. Responses on the scale were 1 = yes, 2 = no, 3 = already doing this, and 4 = does not apply.

*Financial Behavior Stages of Change* was measured using the FPPT questions. “Three months after completing the Investor Education Seminars, was participation in the



seminars associated with more financial behavior change to a higher stage of change in the Transtheoretical Model for some participants? If so, for which participants?” The five FPPTs have been found to correspond with the five Transtheoretical Model (TTM) stages of change (Lown, 2007). Thus, questions 9 and 10 were used to place individuals in a FPPT category that corresponds to the TTM stages of behavior change. Based on the two FPPT questions, a combination of 40 responses were used to categorize participants into one of the five financial personality types: (1) deniers, (2) impulsives, (3) strugglers, (4) savers, and (5) planners (Lown, 2007). The FPPT types were used as a substitute for the TTM stages of change where: deniers = precontemplation, impulsive = contemplation, strugglers = preparation, savers = action, and planners = maintenance (Lown, 2007).

According to the Retirement Confidence Survey, *Planners* enjoy financial planning and research big purchases (Employee Benefit Research Institute, 1999). They are often willing to take considerable financial risk for substantial financial gain. *Savers* tend to be disciplined and are similar to planners in that they enjoy financial planning. However, they are more cautious and risk-adverse than planners. *Strugglers* tend to be disciplined savers and cautious in their financial behavior, but they are frequently set back by unexpected financial events which makes them less confident about their ability to save and invest. *Impulsives* generally have financial goals, but they are not disciplined investors and are often sidetracked because they spend money when they do not plan to buy anything, and they tend to carry a lot of credit card debt. *Deniers* feel that it is pointless to invest for the future and they think that investment planning takes too much

time. They tend to be impulsive shoppers and are unwilling to take any financial risk no matter the potential gain (Employee Benefit Research Institute, 1999).

### **Independent Variables**

Independent variables included: gender, age, marital status, employment status, education, race, household income, and investment assets. Response categories and wording were based on previous research (Burk, 2011; Robb, 2010). The independent variables of gender, marital status, education, employment status, and race were categorical variables. Age was a continuous variable. Total household income was measured in five categories ranging from less than \$50,000 to \$150,000 or more. As shown in Appendix B, current investment assets were measured with six categories ranging from less than \$100,000 to more than 1 million dollars. For statistical analysis, dummy codes were used for grouping variables.

### **Instrumentation**

Financial knowledge, satisfaction, confidence, attitudes, and financial behavior change were measured through three self-report surveys: a pretest, posttest, and follow-up (see Appendices B, C, and D). The surveys were similar in format with additional questions on the posttest using established measures from previous research studies when available. Table 1 lists the constructs, reliability, and sources for the questions.

The pretest survey addressed participants' financial knowledge, satisfaction, confidence, attitudes, behaviors, and demographics (Appendix B). Questions 1-6 addressed participants' investing goals, type of investments they own, and how they rate

their overall investing knowledge. Questions 1-6 follow a similar format as questions from the (NEFE) Evaluation (2010) repository of questions. Question 1 measured participants' overall level of satisfaction with the seminars. Question 2 was a self-rated measure of individuals' overall financial knowledge. Questions 3-6 were qualitative measures to assess the program implementation process and the quality of the program delivery.

Questions 7-11 evaluated participants' investing confidence and financial

Table 1

*Survey Measures, Reliability, and Sources*

Construct	Survey questions	Literature cronbach's alpha	Current study cronbach's alpha	Source
Knowledge & behavior	1-6	-	-	NEFE
Risk tolerance confidence	7	.84	.74	Robb 2010
Financial risk	8	.80	-	Grable & Joo 2004
Financial planning personality type attitudes	9-10	-	.78	Lown 2007 Schwarzer 2010
Self-efficacy	11	.80	-	Robb 2010 Lusardi 2010
Investing knowledge	12-16	-	.69	Lusardi & Mitchell 2009
Investing knowledge	17-21	-	.69	SEC 2010
Financial knowledge	22-33	-	.69	IPT 2008

attitudes. Question 8 assessed risk tolerance (Grable & Joo, 2004). Questions 9 and 10 were adapted from the Retirement Personality Type (RPT) measure, part of the Retirement Confidence Survey (RCS; Employee Benefit Research Institute, 1999). Questions 12-33 measured investing knowledge using multiple choice and true/false questions. Questions 34-41 collected demographic information on gender, age, marital status, employment status, education level, race or ethnicity, household income, and investment assets.

The posttest survey (Appendix C) included the same questions as the pretest plus eight additional questions asking participants to rate the overall quality of each class. Additional space was available for participants to write comments or suggestions for improving the seminars.

The follow-up survey (Appendix D) consisted of six questions from the pretest and posttest that addressed investors' confidence and financial attitudes. An additional question asked what actions participants had taken as a result of attending the Investor Education Seminars.

### **Data Analysis**

The purpose of the study was to evaluate the Investor Education Seminars and measure participant outcomes. Descriptive statistics were used to describe the characteristics of the comparison and treatment groups. An independent sample *t* test determined if there were any significant differences between groups based on age (continuous variable). Crosstabs were used to identify significant group differences on

the categorical variables of age, ethnicity, and employment status. The frequencies and distributions of demographic characteristics were summarized, as well as the percentages, means, and medians of the main independent and dependent variables. The following section addresses each of the five research questions and the data analysis techniques that were used to help answer these questions. The data were analyzed using the Statistical Package for the Social Sciences (SPSS).

### **Research Question One: Satisfaction**

Research question one asked “How satisfied are participants with the Investor Education Seminars?” The posttest survey contained four 5-point Likert-type scales (1 = I didn’t like it, to 5 = Excellent), and four open-ended questions that allowed participants to write comments and suggestions for the class. Descriptive statistics were used to analyze participants’ level of satisfaction.

### **Research Question Two: Knowledge**

The second question, “Does financial knowledge about investing increase more for participants who attend the Investor Education Seminars than for a comparison group?” was answered using 22 questions that measured financial knowledge. Twenty-two multiple choice and true/false questions on the pretest and posttest survey were used to calculate an overall knowledge score. Pretest knowledge scores were compared to posttest scores to determine if knowledge increased. A regression analysis was used to determine if financial knowledge differed between the treatment and comparison groups. Demographic variables that were significantly related to financial knowledge scores were

included in the regression analysis as covariates (ethnicity, age, and employment status).

The Cronbach's alpha for knowledge was .69.

### **Research Question Three: Confidence**

The third question, "Does confidence in ability to invest increase more for those participants who attend the Investor Education Seminars than for a comparison group?" was addressed by comparing responses to participants' confidence levels on the pretest, posttest, and follow-up survey. A regression analysis was performed to examine the degree of change between the treatment and comparison groups' financial confidence scores. The Cronbach's alpha for financial confidence was .74.

### **Research Question Four: Attitudes**

The fourth question, "Do financial attitudes improve more for participants who attend the Investor Education Seminars than for a comparison group?" was measured through responses to participants' attitude scores on the pretest, posttest, and follow-up surveys. Similar to question three, a regression analysis examined the degree of change in attitude score between treatment and comparison pre and posttest scores. Demographic variables that were significantly related to attitudes were included in the regression analysis as covariates. The Cronbach's alpha for the financial attitude FPPT measure was .78.

### **Research Question Five: Behavior**

The fifth question, "Three months after completing the Investor Education Seminars, did participants report that financial behavior improved after taking the course?"

was measured with descriptive statistics. Participants responded to seven questions about what changes they had made as a result of attending the course.

### **Research Question Six: TTM Stage of Change**

The sixth question, “Three months after completing the Investor Education Seminars, was participation associated with more a higher state of change in the Transtheoretical Model for some participants? If so, for which participants?” was evaluated by comparing the FPPT type from pretest to posttest for each participant. The FPPT was then used to determine individuals’ TTM stage of change. Crosstabulations were used to identify which participants were more or less likely to change financial behavior as a result of the seminars.

Some participants may have already been in the preparation, action, or maintenance stages of the TTM prior to the classes. Minimal change was expected in their financial behavior.

### **Data Collection Procedures**

The Investor Education Seminars, held in October 2011, was taught once a week for 1.5 hours per session. While the seminar was free, participants were asked to pre-register through the USU Family Life Center. Participants’ name and email addresses were collected during registration to facilitate comparison of responses across all three surveys. Pre-registration started two weeks prior to the seminar which was advertised via flyers, radio ads, newspapers, and on the Utah State University (USU) campus to the finance and personal financial planning clubs.

Approval for this study was obtained from the USU Institutional Review Board (IRB) for the protection of human subjects. To establish a comparison group, 800 email addresses were obtained from non-profit organizations in Weber County, such as USU Extension and Cottages of Hope, a non-profit organization that provides community resources for individuals. Pretest surveys were emailed to the treatment group prior to the seminar. The comparison group was sent pretest surveys 1 month after the treatment group; this delay was due to the time it took to collect comparison group email addresses. The posttest survey was sent to the treatment group immediately following the last seminar, and the follow-up survey was administered 3 months after the posttest. For the comparison group, the posttest was emailed 1 month after completion of the pretest survey, and the follow-up survey was administered 3 months after the posttest. Reminder emails were sent out 1 week after the survey invitation to individuals who had not yet responded. SurveyMonkey was used to collect data because the service attaches email addresses to each completed survey, facilitating matching of responses.

Each time a survey was sent via email, participants were reminded about the purpose of the study and how the results would be used. No personal identifiable information was associated with the responses, and all information was kept anonymous and confidential. Incentives were offered for completing all three surveys; a drawing was held for one \$250 gift card and ten \$50 cards. Email addresses were used to notify the drawing winners. In addition, the Division gave away a \$50 gift card at each seminar.



## **CHAPTER IV**

### **RESULTS**

This study evaluated the Utah Division of Securities' Investor Education Seminars by measuring participants' overall satisfaction, investing knowledge, confidence, attitudes, and behavior change compared to a group who did not attend the seminars. Six research questions directed the study, and the findings are reported in the following sections. Constructs, reliability, and sources for the questions are shown in Table 1.

#### **Description of the Sample**

Prior to data analyses, frequency distributions and crosstabs were used to identify possible data entry errors and outliers. No outliers were found for the dependent variables of confidence, attitudes, and behavior change. Seventy-one participants registered for the seminars and were emailed the pretest, posttest, and follow-up. For the treatment group, 46 individuals responded to the pretest for a response rate of 64.8% (see Table 2). On the treatment group posttest, 43 responses were received for a response rate of 61.0%; 38 responses were received on the follow-up survey for a response rate of 54.0%.

For the comparison group, 848 surveys were emailed. Thirty-five people responded to the invitation and filled out the pretest for a response rate of 4.1%. Thirty-three individuals responded to the posttest for a response rate of 4.0%, and 44 participants

Table 2

*Number of Respondents and Response Rates*

Group	Initial <i>N</i>	Pretest <i>N</i> (Response rate)	Posttest <i>N</i> (Response rate)	Follow-up <i>N</i> (Response rate)
Treatment	71	46 (64.8%)	43 (61.0%)	38 (54.0%)
Comparison	800	35 (04.1%)	33 (04.0%)	44 (05.1%)

responded to the follow-up survey for a response rate of 5.1%. The total sample size was 81, with a treatment group subsample of 46, and a comparison group subsample of 35.

The average treatment and comparison groups' ages were compared using an independent samples *t* test. Table 3 shows that the treatment group ( $M = 30.8$ ,  $SD = 13.46$ ) was significantly younger than the comparison group ( $M = 44.1$ ,  $SD = 14.62$ ),  $t(77) = 4.189$ ,  $p < .05$ . Despite advertising directed at adults in the community, the fact that the investing class was held on a university campus resulted in younger participants.

Table 3

*Age of Sample*

Age	<i>N</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>
Treatment group	46	30.8	13.46	77	4.189*
Comparison group	33	44.1	14.62	77	

\* $p < .05$

Table 4 summarizes demographic characteristics for the treatment and comparison groups. Women represented 63.0% of the treatment group and 70.0% of the comparison group, while men comprised 37.0% of the treatment group and 30.0% of the comparison group. Most respondents were either married (61.0% in the treatment group and 51.5% in the comparison group) or never married (30.4% in the treatment group and 18.2% in the comparison group). Most treatment group participants were White (93.5% compared to 36.8% for the comparison group). However, more participants in the comparison group were *other* races or ethnicities (72.7% compared to 6.5% in the treatment group). The *other* category included Hispanic, Black, Asian, American Indian, and other. Non-Whites were condensed into one category in order to run crosstabs to meet the required minimum expected counts for each cell. The treatment group had more students (48.9%) than the comparison group (8.0%) while the comparison group had more fulltime workers (64.0%) compared to the treatment group (20.0%).

Crosstabulations were conducted for the categorical demographic variables to identify differences between treatment and comparison group participants. Chi-square analysis (see Table 4) found that the treatment group was significantly younger than the comparison group, are more likely to be White ( $\chi^2 = 5.035$ ,  $df = 1$ ,  $p < .05$ ) and to be students ( $\chi^2 = 19.193$ ,  $df = 3$ ,  $p < .05$ ).

Approximately 50% of treatment group respondents rated their pretest financial knowledge as fair or good; no respondents rated their knowledge as excellent (see Table 5). In the treatment group posttest, 9.3% reported a poor level of knowledge, half as many people as reported on the pretest. Similarly, 90.7% reported a fair or good level of

financial knowledge; none considered themselves as excellent. The comparison group pretest reported that 37.2% of respondents felt they had fair or good levels of financial knowledge; on the posttest 54.6% ranked their knowledge as fair or good.

Table 4

*Demographic Characteristics*

Variables	<u>Treatment group</u>		<u>Comparison group</u>		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	
Gender					
Male	17	37	10	30.3	.378
Female	29	63	23	69.7	
Marital status					
Married	28	60.9	17	51.5	10.021
Living together/partnered	1	2.2	-	-	
Widowed	-	-	2	6.1	
Divorced	3	6.5	6	18.2	
Separated	-	-	2	6.1	
Never married	14	30.4	6	18.2	
Employment category					
Fulltime	9	20.0	16	64.0	19.193*
Parttime	11	24.4	3	12	
Student	22	48.9	2	8.0	
Retired	3	6.7	4	16	
Education level					
High school or GED	2	2.4	5	8.8	.126
Some college/technical training	59	70.2	31	54.4	
Bachelor's degree	12	13.4	13	22.8	
Master's degree	9	10.7	8	14.0	
Ph.D./professional degree	2	2.4	0	-	
Ethnic group					
White	43	93.5	25	36.8	5.035*
Other	3	6.5	8	72.7	
Total household income					
Less than \$50,000	33	71.7	20	60.6	2.30
\$50,000 to less than \$75,000	7	15.2	6	18.2	
\$75,000 to less than \$100,000	1	2.2	3	9.1	
\$100,000 to less than \$150,000	5	10.9	4	12.1	
\$150,000 or more	-	-	-	-	
Current investment assets					
Less than \$100,000	37	80.4	26	78.8	2.151
\$100,000 to less than \$250,000	5	10.9	4	12.1	
\$250,000 to less than \$500,000	2	4.3	3	9.1	
\$500,000 to less than \$750,000	1	2.2	-	-	
\$750,000 to less than \$1 million	1	2.2	-	-	

\* $p < .05$

Table 5

*Participant Self-Rated Overall Level of Financial Knowledge*

Self-assessed financial knowledge	<u>Treatment group</u>		<u>Comparison group</u>		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	
Pretest					
Very poor	8	17.4	6	17.1	.650
Poor	15	32.6	16	45.7	
Fair	18	39.1	10	28.6	
Good	5	10.9	3	8.6	
Excellent	-	-	-	-	
Total	46	100.0	35	100.0	
Posttest					
Very poor	-	9.3	4	12.1	.000*
Poor	4	27.9	11	33.3	
Fair	12	62.8	16	48.5	
Good	27	-	2	6.1	
Excellent	-	-	-	-	
Total	43	100.0	33	100.0	

\*  $p < .05$ 

Twenty-two questions were used to measure financial knowledge. The pretest treatment group scores ranged from 9 to 21 and from 15 to 21 on the posttest (see Table 6). The average treatment group financial knowledge score increased from 18.2 ( $SD = 3.26$ ) on the pretest to 20.5 ( $SD = 1.63$ ) on the posttest. The average comparison group

Table 6

*Mean, Median, and Standard Deviations for Financial Knowledge Scores*

Financial knowledge score	<i>n</i>	Min	Max	<i>M</i>	Median	<i>SD</i>
Treatment group						
Pretest	35	9	22	18.2	19	3.26
Posttest	32	15	22	19.7	20.5	1.63
Comparison group						
Pretest	30	8	22	17.4	19	3.82
Posttest	27	3	22	17.2	18	3.96

comparison group pretest score was 17.4 ( $SD = 3.82$ ) with an average posttest score of 17.2 ( $SD = 3.82$ ). While the treatment group increased their financial knowledge slightly, there was no statistically significant difference between pretest and posttest knowledge scores for either group.

Using standardized  $t$  scores, results from the 5-item financial confidence scale (shown in Table 7) indicate that the treatment group participants improved their financial confidence from the pretest ( $M = 12.9$ ,  $SD = 4.4$ ) to the posttest ( $M = 18.3$ ,  $SD = 3.7$ ). In contrast, the comparison groups' financial confidence scores increased only slightly from the pretest ( $M = 11.4$ ,  $SD = 3.7$ ) to the posttest ( $M = 12.4$ ,  $SD = 4.0$ ).

Contrary to what was expected, financial attitude scores for the treatment group decreased from pretest ( $M = 12.48$ ,  $SD = 2.9$ ) to posttest ( $M = 10.84$ ,  $SD = 2.5$ ). Independent samples  $t$  test show that there was a statistically significant difference between comparison group pretest and posttest attitude scores  $t(4.2) = .000$ . There was not a statistically significant difference for the treatment group (see Table 8).

Table 7

*Mean, Median, and Standard Deviations for Financial Confidence Scores*

Financial confidence score	$n$	Min	Max	$M$	Median	$SD$
Treatment group						
Pretest	46	5	23	12.9	12	4.4
Posttest	43	10	25	18.3	19	3.7
Comparison group						
Pretest	34	5	18	11.4	12	3.7
Posttest	33	5	25	12.4	12	4.0

Table 8

*Mean, Median, and Standard Deviations for Financial Attitude Scores*

Financial attitude score	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>
Treatment group					
Pretest	46	12.48	2.9	2.07	.042
Posttest	43	10.84	2.5	2.07	
Comparison group					
Pretest	34	13.88	3.1	73.45	.000*
Posttest	33	13.09	2.1	73.45	

\* $p < .05$

As shown in Table 9, the most common Financial Planning Personality Type (FPPT) for the pretest treatment group was strugglers (44.4%) followed by savers (33.3%), planners (13.3%), and impulsives (8.9%); there were no deniers. The most

Table 9

*Crosstabs for Financial Planning Personality Types*

FPPT	Treatment group		Comparison group		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	
Pretest					
Deniers	-	-	1	3.1	.031*
Impulsives	4	8.9	1	3.1	
Strugglers	20	44.4	8	25.0	
Savers	15	33.3	9	28.1	
Planners	6	13.3	13	40.7	
Total	45	100.0	32	100.0	
Follow-up					
Deniers	-	-	4	10.0	.005*
Impulsives	2	5.4	1	2.5	
Strugglers	11	29.7	11	27.5	
Savers	22	59.5	7	17.5	
Planners	2	5.4	17	42.5	
Total	37	100.0	40	100.0	

\* $p < .05$

common FPPT for the comparison group pretest was planners (40.7%), followed by savers (28.1%), strugglers (25%), impulsives (3.1%), and deniers (3.1%). On the follow-up, the treatment group showed an increase in savers (59.5%) and a decrease in strugglers (29.7%). For the comparison group, there was an increase in planners (42.5%), strugglers (27.5%), and deniers (10%). The chi-square results for demographic variables were not statistically significant.

## **Research Question Results**

### **Research Question One: Satisfaction**

How satisfied were participants with the Investor Education Seminars? As illustrated in Table 10, the majority of respondents were either satisfied (41.9%) or very satisfied (34.9%) with the seminar. Fewer than 25% of participants were less than satisfied with the course.

Participants were also asked if they would recommend the Investor Education Seminars to others. Of the 43 participants who responded to the posttest, 41 participants (95.4%) said that they would recommend the seminar to others. Four open-ended posttest questions asked participants for comments and suggestions. While some participants appreciated the basic investing concepts, others wanted more depth on stocks, bonds, and how to actually pick and invest in a mutual fund.

Additional comments from the posttest were: the subject matter does not need to be boring, spice it up; very educational and useful information; done really well for basic investor knowledge; switching teachers each week made it more interesting; the lecturers



Table 10

*Level of Satisfaction with the Investor Education Seminars (N = 43)*

Level of satisfaction	<i>n</i>	%
Very satisfied	15	34.9
Satisfied	18	41.9
Somewhat satisfied	6	14.0
Not too satisfied	1	2.3
Not at all satisfied	3	7.0

were knowledgeable and did a good job of answering questions, I would have liked more opportunity to ask questions; I didn't even know a Department of Securities existed before these seminars; and I wish we could go into further detail about investing and how to do it yourself.

### **Research Question Two: Knowledge**

Did financial knowledge about saving and investing increase more for participants who attended the Investor Education Seminars than for those in the comparison group? Twenty-two multiple choice and true/false questions on the pretest and posttest surveys were used to calculate an overall knowledge score.

A hierarchical multiple regression was performed to determine if participation in the course contributed significantly to financial knowledge scores above and beyond pretest knowledge, age, ethnicity, and employment status. The first step of the regression (see Table 11) included pretest financial knowledge, age, ethnicity, and employment status because between group differences were statistically significant for these variables. The second step included the group variable (treatment versus comparison) and adjusted

for demographic differences between groups. Posttest financial knowledge was entered as the dependent variable in order to measure knowledge change from pretest to posttest. According to the hierarchical multiple regression, participation in the seminar did not contribute above and beyond pretest financial knowledge scores. None of the hypothesized predictors of age, ethnicity, or employment status were statistically significant. The treatment group scores ranged from 9 to 21, out of a possible 22, on the pretest and from 15 to 21 on the posttest (see Table 6). The average treatment group knowledge score increased from 18.2 ( $SD = 3.26$ ) on the pretest to 20.5 ( $SD = 1.63$ ) on the posttest. Because both groups scored high on the knowledge pretest, the financial knowledge scale was not able to measure a significant increase in knowledge.

One interesting finding is that 15 individuals in the treatment group rated their pretest financial knowledge as poor, 18 rated their knowledge as fair, and only 5 rated

Table 11

*Regression Predicting Financial Knowledge*

Step predictors	$t$ entry	$t$ final	$B$	SEB	$\beta$	$R^2$ step	$\Delta R^2$	F change	$df$
Step 1:						.282	.282	2.748	4
Pretest financial Knowledge score	1.859	1.929	0.210	.109	.316				
Age	-.422	-.073	-.002	.024	-.013				
Ethnicity	-1.73	-1.50	-1.43	.96	-.26				
Employment status	-1.37	-1.08	-.73	.68	-.18				
Step 2:						.302	.020	.78	1
Group		.81	.71	.81	.16				

their knowledge as good. At posttest, 4 individuals rated their financial knowledge as poor, 12 reported their knowledge as fair, and 27 reported their knowledge as good.

### Research Question Three: Confidence

Did confidence increase more for participants than for the comparison group?

The financial confidence measure averaged the respondents' scores on five Likert-type-scale questions; the higher the score, the greater the level of financial confidence. A hierarchical multiple regression was performed to determine if participation in the course contributed significantly to financial confidence scores above and beyond pretest confidence, age, ethnicity, and employment status (see Table 12). Posttest financial confidence was the dependent variable. The first step of the regression included pretest financial confidence, age, ethnicity, and employment status because they were significant

Table 12

#### *Regression Predicting Financial Confidence*

Step predictors	<i>t</i> entry	<i>t</i> final	<i>B</i>	SEB	$\beta$	$R^2$ step	$\Delta R^2$	F change	<i>df</i>
Step 1:						.44	.44	9.33	4
Pretest financial confidence score	4.26**	5.30**	.48	.09	.45				
Age	-1.13	.09	.002	.03	.008				
Ethnicity	-1.50	-.73	-.78	1.08	-.06				
Employment status	-2.9*	-3.53*	-2.53	.72	-.30				
Step 2:						.69	.25	36.65	1
Group		6.05**	5.01	.83	.53				

\* $p < .05$ , \*\* $p < .01$

between group differences. The impact of the seminar was evaluated holding pretest financial confidence, age, ethnicity, and employment status constant. The second step included the group variable, treatment versus comparison, and adjusted for between group differences.

Controlling for pretest financial confidence, age, ethnicity, and employment status, there is a significant difference between treatment and comparison group in posttest financial confidence. Initial pretest confidence ( $t$  entry = 4.26) with a probability of  $< .01$ , affected posttest confidence ( $t$  final = 5.30,  $p < .01$ ), with or without treatment. When group is added into the regression, there is a significant difference in confidence for the treatment group above and beyond pre and posttest confidence ( $t$  final = 6.05,  $p < .01$ ). The seminars explain the variance above and beyond pretest confidence ( $\Delta R^2 = .25$ ). The average treatment group confidence score increased from pretest ( $M = 12.9$ ,  $SD = 4.4$ ) to posttest ( $M = 18.3$ ,  $SD = 3.7$ ). However, the comparison groups' financial confidence scores increased only slightly from the pretest ( $M = 11.4$ ,  $SD = 3.7$ ) to the posttest ( $M = 12.4$ ,  $SD = 4.0$ ).

#### **Research Question Four: Attitudes**

Did financial attitudes improve more for participants who attended the Investor Education Seminars than for the comparison group? Financial attitude scores were measured using the FPPT questions which were charted on a grid in order to determine participants' financial attitudes at pretest and posttest. A hierarchical multiple regression was performed to determine if participation in the course contributed significantly to an

increase in financial attitude scores above and beyond pretest knowledge, age, ethnicity, and employment status.

Controlling for pretest financial attitude, age, ethnicity, and employment status, there is a significant difference between treatment and comparison group posttest financial attitude scores (see Table 13). Initial pretest attitude ( $t$  entry = 5.58) with a probability of  $< .01$ , affected posttest attitude ( $t$  final = 5.97,  $p < .01$ ), with or without treatment. Group difference was statistically significant ( $t$  final = -3.44). The attitude scores of both groups decreased from pretest to posttest. As shown in Table 8, the comparison groups' posttest score ( $M = 13.09$ ) was higher than the treatment groups' posttest score ( $M = 10.84$ ).

Table 13

*Regression Predicting Financial Attitudes*

Step predictors	$t$ entry	$t$ final	$B$	SEB	$\beta$	$R^2$ step	$\Delta R^2$	F change	$df$
Step 1:						.40	.40	7.88	4
Pretest financial attitude score	5.58**	5.97**	.65	.11	.61				
Age	-.30	-1.24	-.02	.02	-.13				
Ethnicity	.09	-.59	-.52	.88	-.06				
Employment status	-.03	-.20	-.12	.59	-.02				
Step 2:						.52	.12	11.83	1
Group		-3.44*	-2.32	.67	-.38				

\* $p < .05$ , \*\* $p < .01$

### Research Question Five: Behavior

Three months after completing the Investor Education Seminars, did participants report that financial behavior improved after taking the course? The follow-up survey asked participants' what actions they had taken as a result of attending the seminars. More than half (54.0%) of participants said that they had calculated the amount of money needed for a specific goal, and 41.1% said they had reviewed or revised their financial goals. Forty-three percent of participants had set a specific investing goal, and 41.5% reviewed their investments and adjusted as needed. Twenty-seven percent of individuals started investing or increased the amount they were investing, and 8% of participants opened a retirement account (see Table 14).

*Table 14*

*Participants Reported Behavior Change (N = 37)*

Behavior change	Yes	%	Already doing	%
Set specific investing goals	16	43.2%	13	35.1%
Reviewed and/or revised financial goals	19	41.4%	7	18.9%
Calculated the amount of money need for a specific goal	20	54.0%	5	13.5%
Started investing or increased the amount invested	10	27.0%	9	24.3%
Reviewed investments and adjusted as needed	15	40.5%	5	13.5%
Diversified investments or adjusted asset allocation	9	24.3%	9	24.3%
Opened a retirement account	3	08.0%	13	35.1%

### Research Question Six: TTM Stage of Change

Three months after completing the Investor Education Seminars, was participation in the seminars associated with movement to a higher stage of change in the Transtheoretical Model for some participants? If so, for which participants? The FPPT was used to represent the Transtheoretical Model (TTM) stages of change (Lown, 2007).

As shown in Table 9, the most common pretest TTM stage for the treatment group was strugglers (44.4%) followed by savers (33.3%), planners (13.3%), and impulsives (8.9%); there were no deniers. The most common TTM stage for the comparison group pretest was planners (40.7%), followed by savers (28.1%), strugglers (25%), impulsives (3.1%), and deniers (3.1%). On the follow-up test, the treatment group showed an increase in savers (59.5%) and fewer strugglers (29.7%). Overall, the biggest change between pretest and posttest was the increase in savers and decrease in strugglers for the treatment group (see Table 15). There was not a consistent change in stage for the comparison group.

Table 15

#### *Treatment Group TTM Types (N = 45)*

TTM	Pretest <i>n</i> (%)	Follow-up <i>n</i> (%)
Deniers	0 (00.0)	0 (00.0)
Impulsives	4 (09.0)	2 (04.0)
Strugglers	20 (44.4)	11 (24.4)
Savers	15 (33.3)	22 (48.9)
Planners	6 (13.0)	2 (04.0)

After determining that the seminar helped some individuals in the treatment group advance to a higher TTM stage of change, the demographics of these individuals were examined to discover which participants were more or less likely to change their financial behavior and progress to a higher TTM stage. Table 16 compares participants who indicated change in stage three months after the seminar with those who reported no behavior change. The comparison group did change significantly over time. There were only 17 individuals in the comparison group who completed all three surveys. The changes from comparison pretest to follow-up were a result of different individuals.

Of the participants who indicated TTM behavior change from pretest to follow-up 50.0% were students, 57.0% were in college, and 85.7% were White. Total household income of less than \$50,000 for those who changed was 57.1% and 78.6% of participants who indicated behavior change had less than \$100,000 in assets. Similarly, those who did not indicate behavior change were married (61.9%), students (47.6%), and had some college (81.0%). All participants who indicated no TTM change were White (100.0%) with total household income less than \$50,000 (81.0%) and total assets less than \$100,000 (85.7%).

Crosstabs were used to determine if indicated stage of change was significant for any of the demographic variables (see Table 17). Behavior change = 1.00 and no change = .00. None of the crosstabs were statistically significant for the demographic variables, indicating no demographic difference in participants who changed TTM stage and those who did not.



Table 16

*Demographics of TTM Change (N = 35)*

Variables	<u>TTM change (N = 14)</u>		<u>No TTM change (N = 21)</u>	
	<i>n</i>	%	<i>n</i>	%
Gender				
Male	3	21.4	10	47.6
Female	11	78.6	11	52.4
Marital status				
Married	9	64.3	13	61.9
Living together/partnered	-	-	1	4.8
Widowed	-	-	-	-
Divorced	1	7.1	-	-
Separated	-	-	-	-
Never married	4	28.6	7	33.3
Employment category				
Full time	1	7.1	3	14.3
Part time	3	21.4	7	33.3
Student	7	50.0	10	47.6
Retired	2	14.3	1	4.8
Homemaker	1	7.1	-	-
Education level				
High school or GED	1	7.1	-	-
Some college	8	57.1	17	81.0
Bachelor's degree	2	14.3	2	9.5
Master's degree	2	14.3	2	9.5
PhD or professional degree	1	7.1	-	-
Ethnic group				
Black/African-American	-	-	-	-
American Indian	-	-	-	-
Asian/Pacific Islander	1	7.1	-	-
Hispanic/Latino	1	7.1	-	-
White	12	85.7	21	100.0
Other	-	-	-	-
Total household income				
Less than \$50,000	8	57.1	17	81.0
\$50,000 - \$75,000	3	21.4	2	9.5
\$75,000 - \$100,000	1	7.1	-	-
\$100,000 - \$150,000	2	14.3	2	9.5
\$150,000 or more	-	-	-	-
Total assets				
Less than \$100,000	11	78.6	18	85.7
\$100,000 - \$250,000	2	14.3	1	4.8
\$250,000 - \$500,000	-	-	1	4.8
\$500,000 - \$750,000	1	7.1	-	-
\$750,000 - \$1 million	-	-	1	4.8
\$1 million or more	-	-	-	-

Table 17

*Crosstabs for Demographic TTM Change*

Variables	<u>TTM Change</u>		$\chi^2$
	.00	1.00	
Gender			
Male	12	3	.097
Female	17	14	
Marital status			
Married	18	10	.818
Living together/partnered	1	0	
Widowed	-	-	
Divorced	1	1	
Separated	1	0	
Never married	8	6	
Employment category			
Fulltime	8	8	.638
Parttime	8	4	
Student	11	7	
Retired	2	2	
Education level			
High school or GED	1	2	.303
Some college	22	9	
Bachelor's degree	4	2	
Master's degree	2	3	
Ph.D./professional degree	0	1	
Ethnic group			
White	28	15	.381
Hispanic	1	1	
Asian	0	1	
Total household income			
Less than \$50,000	22	10	.576
\$50,000 to less than \$75,000	3	4	
\$75,000 to less than \$100,000	2	1	
\$100,000 to less than \$150,000	2	2	
\$150,000 or more	-	-	
Current investment assets			
Less than \$100,000	24	13	.643
\$100,000 to less than \$250,000	3	2	
\$250,000 to less than \$500,000	1	1	
\$500,000 to less than \$750,000	1	1	
\$750,000 to less than \$1 million	1	0	

\* $p < .05$

### **Summary of Findings**

This chapter presented the statistical results for the program evaluation of the Investor Education Seminars. Overall, participants were satisfied with the seminar and would recommend it to others. Results from chi-square analyses and hierarchical regressions indicate that there was not a significant change in financial knowledge from pretest to posttest. However, financial confidence improved for the treatment group above and beyond pretest financial confidence, age, ethnicity, and employment. Financial attitude scores decreased for the treatment group from pretest to posttest. Many individuals in the treatment group progressed from struggler to saver in the TTM. More than half of participants reported that they had made positive financial changes as a result of attending the seminars.

## **CHAPTER V**

### **DISCUSSION**

In the past decade there has been increased recognition of the need for financial education in the United States. As a result, many financial programs have been developed in an effort to improve financial literacy among consumers. An increase in financial education programs has led policymakers and researchers to ask the question, “How effective are these financial programs” (Collins & O’Rourke, 2010). There is a need for quality financial education programs that help consumers achieve financial capability and make informed financial decisions. Because there is no industry standard for financial education outcomes and performance, continued evaluation is necessary to ensure quality financial programs.

This study was conducted to evaluate the Utah Division of Securities Investor Education Seminars by measuring satisfaction, knowledge, confidence, attitudes, and behavior. The findings of this study contribute to the discussion of the effectiveness of financial education programs and the impact of financial education on participant knowledge, attitudes, confidence, and behavior.

The results discussed in this chapter provide evidence that the Investor Education Seminars were effective in improving participants’ financial confidence and behavior. Participants’ overall satisfaction with the seminar was also evaluated. Chi-square crosstabulations, frequencies, *t* tests, and hierarchical regressions were used to measure financial knowledge, confidence, attitudes, and behavior with a .05 level of statistical significance.

Results from the hierarchical regression on financial knowledge did not support the hypothesis that participation in the seminars would increase financial knowledge. There was not a significant increase in financial knowledge for the treatment or comparison group from pretest to posttest. This is due to the fact that participants in both the treatment and comparison groups scored high on the financial knowledge on the pretest, leaving little room for improvement. This finding is consistent with previous research suggesting that persons who seek financial education are more likely to have a higher level of financial knowledge than individuals who do not participate (Burk, 2011; McCormick, 2009).

Most previous research shows that financial education increases participants' knowledge (Danes & Haberman, 2007; Kim, 2007; Lyons et al., 2008; Peng, Bartholomae, Fox, & Cravener, 2007; Wiener, Baron-Donovan, Gross, & Block-Lieb, 2005). Even though the treatment group's financial knowledge scores did not increase from pretest to posttest, respondents said that their financial knowledge had improved. This is important because it shows that participants feel like they actually learned something from the seminars even though there was not a significant improvement in knowledge scores.

One reason why knowledge scores did not increase may be a result of treatment fidelity. Many of the knowledge questions were taken directly from the Investor Education 2020 curriculum. Because the seminars did not follow the curriculum closely, some of the knowledge questions did not measure what was actually taught. However, this discrepancy may only partially explain why there was only a slight increase in

financial knowledge. The treatment group financial knowledge score was so high at pretest that there was little room for improvement on the posttest survey.

The financial confidence results support the hypothesis that participating in the Investor Education Seminars would improve financial confidence. This finding is consistent with previous research (Danes & Haberman, 2007; Garman, Kim, Kratzer, Brunson, & Joo, 1999). The treatment group increased their financial confidence scores above and beyond group differences in age, ethnicity, and employment status. This is an important finding for the Division because this suggests that seminar participants gained confidence, which could help them build on the knowledge they already had and promote investing capability.

Financial attitude scores results did not support the hypothesis that participants would have a more positive attitude toward investing after attending the seminar. The FPPT may not have been the best instrument for measuring financial attitudes based on the topics that were actually taught during the seminars. The FPPT is designed to measure attitudes toward general financial management rather than focusing on investing attitudes.

The results from the follow-up survey support the hypothesis that 3 months after the seminars, participants would have made positive behavior change. Many participants reported that they had calculated the amount of money needed for a specific purpose or goal and reviewed or revised their financial goals, set a specific investing goal, or reviewed investments and adjusted as needed. These results suggest that many individuals took positive financial actions as a result of attending the seminars, which is

consistent with previous research (Collins & O'Rourke, 2010). Participants who took action as a result of attending the seminars is evidence of increased investor capability. The National Financial Capability Study (FINRA, 2009) concluded that increasing financial capability can affect Americans' financial security, well-being, and prosperity.

The results of this study were consistent with Prochaska's (1979) Transtheoretical Model of Change (TTM). The TTM describes how individuals progress through stages of change to modify a negative behavior or to embrace a positive behavior (Prochaska et al., 1992, 1994).

Financial behavior was measured at pretest and follow-up. In the treatment group there was a shift from struggler to saver (i.e., preparation to action). Furthermore, there was no downward shift among the stages of change within the treatment group for the first four stages; participants either maintained or increased their TTM stage of change from pretest to follow-up. In contrast, there was generally no shift in the TTM stages of change for the comparison group. It is important to note that those individuals who were in the preparation and action stage experienced the most change. This may be a result of the increase in confidence resulting from attending the seminars that motivated them to make positive behavior change. These results support the hypothesis that the Investor Education Seminars facilitated change to a higher TTM stage of change. When consumers make positive financial changes they are increasing in financial capability and financial security (FINRA, 2009).

It is important to note that the majority of participants were already in the preparation, action, or maintenance stages prior to the seminars. Most of the treatment

group participants appeared to already be motivated to learn and make changes when they registered for the seminar. This is consistent with previous program evaluation research (Meier & Sprenger, 2007). Additionally, it is not surprising that few participants were in the precontemplation and contemplation stages of change. Individuals in the precontemplation stage are unaware of their need to make changes to their current behavior, so they are not likely to seek out education programs (Prochaska, 1979). While individuals in the contemplation stage may be more aware that a change needs to be made, they are still not ready to take the first step (Prochaska, 1979). Thus, it was anticipated that individuals in the initial TTM stages of change would show little progression due to their preexisting resistance to change.

Chi-square results for the TTM suggest that demographic variables were not significant in predicting which individuals were more likely to progress through the stages of change. This may be because the treatment group was very homogenous, mostly university students with similar education, income, and employment status. While the crosstab results indicate that the demographic variables were not significant in determining financial behavior change, other studies with more diverse samples have found that age, education, marital status, income, and employment may affect financial behavior change (Jain & Mandot, 2012).

Overall, participants were satisfied with the Investor Education Seminars and would recommend the classes to others. Some suggestions were made to improve the seminars, such as more in depth information on stocks and bonds and how to actually



select a mutual fund. However, the majority of respondents indicated that the information was useful.

Financial education has the potential to assist individuals in achieving financial capability. While many people benefit from attending financial education programs, it is often those who could benefit the most who do not participate. Those who lack financial knowledge and confidence may be more vulnerable to financial struggles and investment fraud. Therefore, they have a greater need for financial assistance and education but are less likely to seek out or participate in financial education. Thus, one area that financial educators, counselors, and policy makers should concentrate on is advertising techniques that provide targeted incentives to those in the early stages of change.

### **Limitations and Strengths**

There are several limitations that should be addressed. One is the demographic difference between treatment and comparison groups. Age and income were quite different between the two groups partially because the treatment and comparison group were from two different counties and because of differences in advertising and recruitment strategies. However, crosstabulations were conducted in order to determine significant group differences at pretest and those differences were taken into account in the hierarchical regressions.

Another limitation is that the same participants did not fill out all three surveys. Although 32 participants in the treatment group completed all three surveys, only 17 control group participants consistently answered all three surveys. However, respondents'

answers were tracked so that results could be compared for the individuals who completed all three surveys.

While the small sample size was another limitation, both the treatment and comparison groups were above the 30 participant minimum (Gall, Gall, & Borg, 2007). The larger the sample size, the more likely participants' scores will be representative of the population on the measured variables (Gall et al., 2007). However, the sample size for both the treatment and comparison groups was above the conventional 30 participant minimum (Gall et al., 2007).

Providing education in similar locations would also enhance comparability of treatment and comparison groups. While the seminars in Cache County were advertised throughout the community, the majority of participants were college students. The participants in Weber County were recruited through email lists from local non-profit organizations. In order to ensure a more comparable treatment and comparison group it would be beneficial to advertise to the treatment and comparison group in the same manner.

Another limitation was the discrepancy between the curriculum provided to the evaluators to develop the surveys and the actual content of the four lessons. Because the university IRB requires all surveys to be approved before the research starts, it is difficult to make changes mid-stream when the evaluators attended the sessions and realized the content deviated from the initial surveys.

There were also a number of strengths in this study. One of the primary strengths was the use of a comparison group. Because in this study it was not feasible to randomly

assign participants to the treatment or comparison group, a true experimental design could not be used. However, a comparison group was included to attempt to address selection bias. Absence of a comparison group is one of the biggest weaknesses in financial education evaluation (Collins & O'Rourke, 2010). The use of a comparison group helped control threats to internal validity and avoid inflating the estimated positive effects of the seminars.

The assessment of financial knowledge, confidence, attitudes, and behavior change also strengthened this study. In their review of the financial education program evaluation literature, Collins and O'Rourke (2010) pointed out that the majority of program evaluations assess financial knowledge, some measure behavior change, but very few evaluate attitudes and confidence. The investor education program evaluation, with the use of a logic model, measured all four categories.

An additional strength of this study was the use of a longitudinal design. According to Collins and O'Rourke (2010), a longitudinal design helps to strengthen a program evaluation; yet most financial education evaluations collect data at only one point in time. When measuring behavior change, it is beneficial for researchers to evaluate change over time (Gall et al., 2007). The administration of a pretest, posttest, and three-month follow-up improved measurement of the program impacts.

The use of an independent evaluator strengthened this study. According to Collins and O'Rourke (2010), most program evaluations are conducted by individuals within the organization. An independent evaluator can control for bias when assessing the effectiveness of a program (Collins & O'Rourke, 2010).

### **Recommendations for Future Research**

The addition of a qualitative component to the quantitative research would provide valuable information about the effectiveness of financial education.

Collecting qualitative data from participants would provide a richer perspective on what they found useful and what motivated them to make changes as a result of the education. More mixed methods research is needed in the future in order to better understand the effectiveness of financial education programs.

A longer follow-up time frame, as well as multiple follow-ups, would provide more information about how effective the seminars were at creating long-term financial behavior change. The 3-month follow-up was used because it was assumed that participants were most likely to make financial behavior change soon after the seminar. However, it is possible that the follow-up itself prompted additional behavior change for some individuals as they were reminded about their financial goals. It is recommended that future researchers include a second brief follow-up to facilitate any additional behavior change prompted by the initial follow-up.

In future studies, conducting a posttest survey after each class would provide more accurate data on the effectiveness of the different instructors. It would also be beneficial to ask respondents which seminars they attended since not all participants attended each seminar. This would provide helpful feedback to the instructors on content and presentation.

A critical factor in determining the effectiveness of an educational program is ensuring that the program studied is implemented with accuracy. Treatment fidelity

strives to monitor and enhance the accuracy of an intervention by ensuring that the program is implemented as planned (Gall et al., 2007). Future research should focus on treatment fidelity so that the curriculum and program evaluation are implemented as planned.

Overall, the investor education seminars were successful in motivating participants to make positive behavior change. Participants also increased their financial confidence. Confidence is key in helping individuals progress from financial knowledge to financial capability. The seminars empowered more than half of participants to take positive actions in their lives, and some participants reported that their financial knowledge had increased.

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## APPENDICES

## Appendix A. Logic Model: Investor Education Seminar Series

### Logic Model: Investor Education Seminars

<b><i>Problem Statement</i></b>
<ul style="list-style-type: none"> <li>▪ Insufficient financial knowledge about investing</li> </ul>
<b><i>Goal Statement</i></b>
<ul style="list-style-type: none"> <li>▪ Increase financial capability among participants</li> </ul>
<ul style="list-style-type: none"> <li>▪ Assumptions</li> </ul>
<ul style="list-style-type: none"> <li>▪ Resources are adequate and available</li> <li>▪ Participants are able to attend all four seminars</li> <li>▪ Knowledge leads to behavior change</li> </ul>
<b><i>External Factors</i></b>
<ul style="list-style-type: none"> <li>▪ Participants' personal preferences and experiences</li> <li>▪ Participants ability to attend all four seminars</li> </ul>
<b><i>Inputs</i></b>
<ul style="list-style-type: none"> <li>▪ Instructor</li> <li>▪ Room</li> <li>▪ Time</li> <li>▪ Materials</li> <li>▪ Equipment</li> <li>▪ Technology</li> </ul>
<b><i>Outputs</i></b>
<ul style="list-style-type: none"> <li>▪ Number of participants who attend</li> <li>▪ Number of sessions provided</li> </ul>
<b><i>Activities</i></b>
<ul style="list-style-type: none"> <li>▪ Develop curriculum</li> <li>▪ Schedule meeting time and place</li> <li>▪ Conduct sessions Investor Education 2020 curriculum</li> <li>▪ Facilitate retirement preparation</li> <li>▪ Provide education and advising</li> </ul>
<b><i>Short-term Impacts</i></b>
<ul style="list-style-type: none"> <li>▪ Increase in participants' financial knowledge</li> <li>▪ Improvement in participants' financial confidence</li> <li>▪ Overall participant satisfaction</li> <li>▪ Aid in setting financial goals</li> </ul>
<b><i>Long-term Impacts</i></b>
<ul style="list-style-type: none"> <li>▪ Improved or maintained investing behavior</li> </ul>
<b><i>Overall Impacts</i></b>
<ul style="list-style-type: none"> <li>▪ Participants achieve financial capability</li> <li>▪ Participants achieve investing goals</li> <li>▪ Greater economic stability and less investment fraud</li> </ul>

## Appendix B. Pretest Survey.

This survey is being conducted to learn more about the people who have registered for the *Investor Education 2020 Seminar* offered by the Utah Division of Securities. Questions will ask you to check a response about your current investing behaviors and to gauge your level of understanding and confidence about investing. Your responses will help us better understand our audience and, at the end, evaluate the classes.

This program evaluation will consist of a pretest, posttest, and follow-up surveys. As an incentive to participate, the email addresses of individuals who complete all three surveys will be entered into a drawing for one \$250 gift card and ten \$50 gift cards.

This study is being conducted by:

Dr. Jean Lown, Professor  
Alena Johnson, Senior Lecturer  
Department of Family, Consumer, and Human Development  
Utah State University

**1. How would you rate your overall investment knowledge?**

Very poor  
Poor  
Fair  
Good  
Excellent

**2. Do you use an investment advisor?**

Yes  
No

**3. What are your top 3 investment goals? Please indicate them with the numbers 1-3**

- a. Retirement \_\_\_\_\_
- b. Emergencies \_\_\_\_\_
- c. Major purchase \_\_\_\_\_
- d. Family needs \_\_\_\_\_
- e. House purchase \_\_\_\_\_
- f. Education \_\_\_\_\_

**4. Do you invest for retirement through a plan at work?**

Yes/  
No/  
Not offered or does not apply

**5. Do you invest for retirement in a personal account (not through your employment) such as an IRA, SEP, SIMPLE, or supplemental retirement account?**

Yes  
No

**6. How often do you change or rebalance your investments?**

I do not have any investments yet.

At least once a year

Once every few years

Rarely

Never

**The following questions ask about your investing confidence and attitudes.**

**7. Please select the response that best describes your confidence to do the following:**

<b>How confident are you that you:</b>	<b>Not at all confident</b>	<b>Not too confident</b>	<b>Somewhat confident</b>	<b>Confident</b>	<b>Very confident</b>
a. can choose appropriate investments?	1	2	3	4	5
b. can develop an effective investment plan?	1	2	3	4	5
c. can avoid investment scams?	1	2	3	4	5
d. know where to get trustworthy investment advice?	1	2	3	4	5
e. can achieve your investment goals?	1	2	3	4	5

**8. Please indicate your level of agreement with the following five statements:**

**a. Investing is too difficult to understand.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**b. I am more comfortable putting my money in a bank account than in the stock market.**

Strongly agree

Tend to agree

Tend to disagree



Strongly disagree

**c. When I think of the word “risk” the term “loss” comes to mind immediately.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**d. Making money in stocks and bonds is based on luck.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**e. In terms of investing, safety is more important than returns.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**9. Which of these *Financial Attitude* statements *best* describes you? Choose only one.**

- ☐ Just when I think I have a handle on my finances, something always happens that sets me back from my financial goals.
- ☐ I am disciplined at saving.
- ☐ I am willing to take substantial financial risk for substantial gain.
- ☐ I frequently spend money when I do not plan to buy anything.
- ☐ I pay off my credit cards every month.
- ☐ I always research and plan for a big purchase.
- ☐ I am not willing to take any financial risks, no matter what the gain.
- ☐ I enjoy financial planning.

**10. Which of these *Financial Planning* statements *best* describes you? Choose only one.**

- ☐ I think anyone can have a comfortable lifestyle, if they just plan and save.
- ☐ I feel it is pointless to plan for the future because it is too far away to know what I will need.
- ☐ If I just save some money each month, I will be fine in the future.
- ☐ I think preparing for the future takes too much time and effort.
- ☐ I am more of a saver than an investor.

**11. Please respond to each of the following statements using these response categories:**

**1 = Exactly true   2 = Moderately true   3 = Hardly true   4 = Not at all true**

1. I can always manage to solve difficult problems if I try hard enough.
2. It is hard to stick to my spending plan when unexpected expenses arise.
3. It is challenging to make progress toward my financial goals.
4. When unexpected expenses occur I usually have to use credit.
5. I am confident that I could deal efficiently with unexpected events.
6. When faced with a financial challenge, I have a hard time figuring out a solution.
7. I lack confidence in my ability to manage my finances.
8. I can solve most problems if I invest the necessary effort.
9. I believe the way I manage my money will affect my future.
10. I can remain calm when facing difficulties because I can rely on my coping abilities.
11. I feel confident about making decisions that deal with money.
12. My financial situation depends on my comparison of the situation.

**The following questions ask about your financial knowledge.**

**12. Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?**

- a. More than \$102
- b. Exactly \$102
- c. Less than \$102
- d. I do not know

**13. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?**

- a. More than today
- b. Exactly the same
- c. Less than today
- d. I do not know

**14. Buying a single company stock usually provides a safer return than a stock mutual fund.**

- a. True
- b. False
- c. I do not know

**15. Suppose you had \$100 in a savings account and the interest rate is 20% per year and you never withdraw money or interest payments. After 5 years, how much would you have on this account in total?**

- a. More than \$200
- b. Exactly \$200

- c. Less than \$200
- d. I do not know

**16. Suppose that next year, your income doubles and prices of all goods double too. How much will you be able to buy with your income?**

- a. More than today
- b. The same
- c. Less than today
- d. I do not know

**17. If you buy a company's stock:**

- a. You own a part of the company
- b. You have lent money to the company
- c. You are liable for the company's debts
- d. The company will return your original investment to you with interest
- e. I do not know

**18. If you buy a company's bond:**

- a. You own a part of the company
- b. You have lent money to the company
- c. You are liable for the company's debts
- d. You can help manage the company
- e. I do not know

**19. Monique owns a wide variety of stocks, bonds, and mutual funds to lessen her risk of losing money. This is called:**

- a. Saving
- b. Compounding
- c. Diversifying
- d. I do not know

**20. Maria wants to have \$100,000 in 20 years. The sooner she starts to save, the less she'll need to save because:**

- a. The stock market will go up
- b. Interest rates will go up
- c. Interest on her savings will start compounding
- d. I do not know

**21. Bob is 22 years old and wants to start saving now for his retirement. Of these choices, where should Bob put most of his money now for this long-term goal?**

- a. A savings account at the bank
- b. A checking account at the bank
- c. A mutual fund that invests in stocks
- d. I do not know

**22. Before investing, a person should have all of the following *EXCEPT***

- a. Unpaid balances on several credit cards

- b. Sufficient income to exceed current spending
- c. Savings to cover typical emergencies
- d. A financial/investment plan that will be regularly modified
- e. I do not know

**23. Which of the following statements is characteristic of securities fraud?**

- a. Salesperson provides accurate and complete information.
- b. Salesperson is usually a local person who works for a reputable investment firm and is known to the family.
- c. Salesperson guarantees that the investor will make sky-high profits.
- d. Salesperson does not pressure for a quick decision.
- e. I do not know

**True or False**

**24. T/F** Since young people have more time to invest, they can afford to take more risks in their investments.

**25. T/F** Having a combination of varied investments in your portfolio reduces your overall risk to loss.

**26. T/F** Investing in Mutual Funds is a good way to achieve diversification.

**27. T/F** The time value of money brings additional yields through compound interest.

**28. T/F** “Never put all your eggs in one basket” demonstrates the need for investment diversification.

**29. T/F** Risk tolerance refers to the amount of money you put in your no-risk savings account.

**30. T/F** As a general rule, the greater the risk, the higher the potential rate of return.

**31. T/F** Load and no-load mutual funds have annual management fees.

**32. T/F** People of all income levels and professions can be taken by investment fraud.

**33. T/F** It is very easy to tell the difference between people who sell fraudulent investments and those who are legitimate business people.

**The following questions are about you and your family.**

**34. What is your gender?**

Male  
Female

**35. What is your current age? \_\_\_\_\_ years****36. What is your marital status?**

Married  
Living together/partnered  
Widowed  
Divorced  
Separated  
Never married

**37. What is your primary employment status?**

Full time  
Part time  
Unemployed or underemployed  
Student  
Homemaker  
Retired

**38. What is the highest level of education you have completed?**

High school or GED  
Some college or technical training beyond high school  
Bachelor's degree  
Master's degree  
Ph.D. or Professional degree i.e., J.D., M.D., D.V.M. etc..

**39. What is your primary race or ethnicity?**

American Indian or Alaska Native  
Asian or Pacific Islander  
Black or African-American  
Hispanic or Latino  
White or White  
Other

**40. What was your total *household* income last year, before taxes? Please include income from all sources.**

Less than \$50,000  
\$50,000 to less than \$75,000  
\$75,000 to less than \$100,000  
\$100,000 to less than \$150,000  
\$150,000 or more

**41. In total, about how much money do you and your spouse/partner currently have in investment assets? This includes bank accounts, stocks, bonds, mutual funds, and retirement accounts.**

- Less than \$100,000
- \$100,000 to less than \$250,000
- \$250,000 to less than \$500,000
- \$500,000 to less than \$750,000
- \$750,000 to less than \$1 million
- \$1 million or more

Thank you for participating in this study. Your responses will help us evaluate the Division of Securities Investor Education classes.

## Appendix C. Posttest Survey.

This survey is being conducted to learn more about the people attended the *Investor Education 2020 Seminar* offered by the Utah Division of Securities. Questions will ask you to check a response about your current investing behaviors and to gauge your level of understanding and confidence about investing. Your responses will help us better understand our audience and, at the end, evaluate the classes.

This program evaluation will consist of a pretest, posttest, and follow-up surveys. As an incentive to participate, the email addresses of individuals who complete all three surveys will be entered into a drawing for one \$250 gift card and ten \$50 gift cards.

This study is being conducted by:

Dr. Jean Lown, Professor  
Alena Johnson, Senior Lecturer  
Department of Family, Consumer, and Human Development  
Utah State University

**The following questions ask about your satisfaction.**

**1. How would you rate your overall level of satisfaction with the Investor Education Seminar?**

- Not at all satisfied
- Not too satisfied
- Somewhat satisfied
- Satisfied
- Very satisfied

**2. What did you like the most about the *Investor Education Seminar*? (Please describe)**

**3. What did you like the least about the *Investor Education Seminar*? (Please describe)**

**4. Would you recommend the *Investor Education Seminar* to others?**

- Yes
- No
- If no, why not? (Please describe).**

**5. Now that you've attended the classes, how would you rate your overall level of investment knowledge?**

- Very poor
- Poor
- Fair
- Good



Excellent

The following questions ask about your investment confidence.

6. Please select the response that best describes your confidence to do the following:

How confident are you that you:	Not at all confident	Not too confident	Somewhat confident	Confident	Very confident
a. can choose appropriate investments?	1	2	3	4	5
b. can develop an effective investment plan?	1	2	3	4	5
c. can avoid investment scams?	1	2	3	4	5
d. know where to get trustworthy investment advice?	1	2	3	4	5
e. can achieve your investment goals?	1	2	3	4	5

7. Please indicate your level of agreement with the following five statements:

**a. Investing is too difficult to understand.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**b. I am more comfortable putting my money in a bank account than in the stock market.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**c. When I think of the word “risk” the term “loss” comes to mind immediately.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**d. Making money in stocks and bonds is based on luck.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**e. In terms of investing, safety is more important than returns.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**8. Which of these *Financial Attitude* statements *best* describes you? Choose only one.**

- ☐ Just when I think I have a handle on my finances, something always happens that sets me back from my financial goals.
- ☐ I am disciplined at saving.
- ☐ I am willing to take substantial financial risk for substantial gain.
- ☐ I frequently spend money when I do not plan to buy anything.
- ☐ I pay off my credit cards every month.
- ☐ I always research and plan for a big purchase.
- ☐ I am not willing to take any financial risks, no matter what the gain.
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**9. Which of these *Financial Planning* statements *best* describes you? Choose only one.**

- ☐ I think anyone can have a comfortable lifestyle, if they just plan and save.
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- ☐ I think preparing for the future takes too much time and effort.
- ☐ I am more of a saver than an investor.

**10. Please respond to each of the following statements using these response categories:**

**1 = Exactly true   2 = Moderately true   3 = Hardly true   4 = Not at all true**

1. I can always manage to solve difficult problems if I try hard enough.
2. It is hard to stick to my spending plan when unexpected expenses arise.
3. It is challenging to make progress toward my financial goals.
4. When unexpected expenses occur I usually have to use credit.
5. I am confident that I could deal efficiently with unexpected events.

6. When faced with a financial challenge, I have a hard time figuring out a solution.
7. I lack confidence in my ability to manage my finances.
8. I can solve most problems if I invest the necessary effort.
9. I believe the way I manage my money will affect my future.
10. I can remain calm when facing difficulties because I can rely on my coping abilities.
11. I feel confident about making decisions that deal with money.
12. My financial situation depends on my comparison of the situation.

**Now that you have completed the Investor Education Seminar, please respond to the following questions about your financial knowledge.**

**11. Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?**

- a. More than \$102
- b. Exactly \$102
- c. Less than \$102
- d. I do not know

**12. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?**

- a. More than today
- b. Exactly the same
- c. Less than today
- d. I do not know

**13. Buying a single company stock usually provides a safer return than a stock mutual fund.**

- a. True
- b. False
- c. I do not know

**14. Suppose you had \$100 in a savings account and the interest rate is 20% per year and you never withdraw money or interest payments. After 5 years, how much would you have on this account in total?**

- a. More than \$200
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- c. Less than \$200
- d. I do not know

**15. Suppose that next year, your income doubles and prices of all goods double too. How much will you be able to buy with your income?**

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- b. The same
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- d. I do not know

**16. If you buy a company's stock:**

- a. You own a part of the company
- b. You have lent money to the company
- c. You are liable for the company's debts
- d. The company will return your original investment to you with interest
- e. I do not know

**17. If you buy a company's bond:**

- a. You own a part of the company
- b. You have lent money to the company
- c. You are liable for the company's debts
- d. You can help manage the company
- e. I do not know

**18. Monique owns a wide variety of stocks, bonds, and mutual funds to lessen her risk of losing money. This is called:**

- a. Saving
- b. Compounding
- c. Diversifying
- d. I do not know

**19. Maria wants to have \$100,000 in 20 years. The sooner she starts to save, the less she'll need to save because:**

- a. The stock market will go up
- b. Interest rates will go up
- c. Interest on her savings will start compounding
- d. I do not know

**20. Bob is 22 years old and wants to start saving now for his retirement. Of these choices, where should Bob put most of his money now for this long-term goal?**

- a. A savings account at the bank
- b. A checking account at the bank
- c. A mutual fund that invests in stocks
- d. I do not know

**21. Before investing, a person should have all of the following *EXCEPT***

- a. Unpaid balances on several credit cards
- b. Sufficient income to exceed current spending
- c. Savings to cover typical emergencies
- d. A financial/investment plan that will be regularly modified
- e. I do not know

**22. Which of the following statements is characteristic of securities fraud?**

- a. Salesperson provides accurate and complete information.
- b. Salesperson is usually a local person who works for a reputable investment firm and is known to the family.
- c. Salesperson guarantees that the investor will make sky-high profits.
- d. Salesperson does not pressure for a quick decision.
- e. I do not know

### **True or False**

- 23. T/F** Since young people have more time to invest, they can afford to take more risks in their investments.
- 24. T/F** Having a combination of varied investments in your portfolio reduces your overall risk to loss.
- 25. T/F** Investing in Mutual Funds is a good way to achieve diversification.
- 26. T/F** The time value of money brings additional yields through compound interest.
- 27. T/F** “Never put all your eggs in one basket” demonstrates the need for investment diversification.
- 28. T/F** Risk tolerance refers to the amount of money you put in your no-risk savings account.
- 29. T/F** As a general rule, the greater the risk, the higher the potential rate of return.
- 30. T/F** Load and no-load mutual funds have annual management fees.
- 31. T/F** People of all income levels and professions can be taken by investment fraud.
- 32. T/F** It is very easy to tell the difference between people who sell fraudulent investments and those who are legitimate business people.

### **Please answer the following questions about the Investor Education Seminar Series**

- 33.** On a scale of 1-5 please evaluate class #1 titled Financial Goals.  
                     5(Excellent)   4                      3                      2                      1(I didn't like it)

- 34.** Comments from Class #1

- 35.** On a scale of 1-5 please evaluate Class #2 titled Where to Invest your Money.

5(Excellent) 4            3            2            1(I didn't like it)

**36. Comments from Class #2**

**37. On scale from 1-5 please evaluate class #3 titled Choosing a Financial Planner.**

5(Excellent) 4            3            2            1(I didn't like it)

**38. Comments from Class #3**

**39. On a scale from 1-5 please evaluate class #4 titled Avoiding Investment Fraud and Scams.**

5(Excellent) 4            3            2            1(I didn't like it)

**40. Comment from class #4**

**The following questions are about you and your family. *If you already responded to these questions on the pretest you are now finished.* If you did not provide this information on the pretest, please respond now.**

**41. What is your gender?**

Male

Female

**42. What is your current age? \_\_\_\_\_ years**

**43. What is your marital status?**

Married

Living together/partnered

Widowed

Divorced

Separated

Never married

**44. What is your primary employment status?**

Full time

Part time  
 Unemployed or underemployed  
 Student  
 Homemaker  
 Retired

**45. What is the highest level of education you have completed?**

High school or GED  
 Some college or technical training beyond high school  
 Bachelor's degree  
 Master's degree  
 Ph.D. or Professional degree i.e., J.D., M.D., D.V.M. etc..

**46. What is your primary race or ethnicity?**

American Indian or Alaska Native  
 Asian or Pacific Islander  
 Black or African-American  
 Hispanic or Latino  
 White or White  
 Other

**47. What was your total *household* income last year, before taxes? Please include income from all sources.**

Less than \$50,000  
 \$50,000 to less than \$75,000  
 \$75,000 to less than \$100,000  
 \$100,000 to less than \$150,000  
 \$150,000 or more

**48. In total, about how much money do you and your spouse/partner currently have in investment assets? This includes bank accounts, stocks, bonds, mutual funds, and retirement accounts.**

Less than \$100,000  
 \$100,000 to less than \$250,000  
 \$250,000 to less than \$500,000  
 \$500,000 to less than \$750,000  
 \$750,000 to less than \$1 million  
 \$1 million or more

Thank you for participating in this study. Your responses will help us evaluate the investment classes.

## Appendix D. Follow-up Survey.



This final follow-up survey is being conducted to determine the effectiveness of the Investor Education 2020 Seminar taught by the Utah Division of Securities. Survey questions will ask you to check a response or provide a short answer to gauge your level of understanding and confidence in regards to investing and also your current investing behaviors. Your thoughtful responses will help us evaluate the value of the Investor Education Seminars.

As an incentive to complete this final survey, the email addresses of individuals who return all three surveys, i.e. pretest, posttest, and follow-up, will be entered into a drawing for prizes, including one \$250 gift card and/or ten \$50 gift cards.

This study is being conducted by:

Dr. Jean Lown, Professor  
Alena Johnson, Senior Lecturer  
Department of Family, Consumer, and Human Development  
Utah State University

**1. How would you rate your overall investment knowledge?**

Very poor  
Poor  
Fair  
Good  
Excellent

**2. Please select the response that best describes your confidence to do the following:**

<b>How confident are you that you:</b>	<b>Not at all confident</b>	<b>Not too confident</b>	<b>Somewhat confident</b>	<b>Confident</b>	<b>Very confident</b>
a. can choose appropriate investments?	1	2	3	4	5
b. can develop an effective investment plan?	1	2	3	4	5
c. can avoid investment scams?	1	2	3	4	5
d. know where to get trustworthy investment advice?	1	2	3	4	5
e. can achieve your investment goals?	1	2	3	4	5

**3. Please tell us about any actions you have taken as a result of the Investor Education seminar. Please select the response that best describes your answer.**

<b>As a result of the <i>Investor Education Seminar</i>, have you:</b>	<b>Yes</b>	<b>No</b>	<b>Already doing this</b>	<b>Does not apply</b>
a. Set specific investing goals?	1	2	3	4
b. Reviewed and/or revised financial goals?	1	2	3	4
c. Calculated the amount of money needed for a specific goal?	1	2	3	4
d. Started investing or increased the amount you invest?	1	2	3	4
e. Reviewed your investments and adjusted as needed?	1	2	3	4
f. Diversified investments or adjusted your asset allocation?	1	2	3	4
g. Opened a retirement account?	1	2	3	4

**4. Please indicate your level of agreement with the following five statements:**

**a. Investing is too difficult to understand.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**b. I am more comfortable putting my money in a bank account than in the stock market.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**c. When I think of the word “risk” the term “loss” comes to mind immediately.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**d. Making money in stocks and bonds is based on luck.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**e. In terms of investing, safety is more important than returns.**

Strongly agree

Tend to agree

Tend to disagree

Strongly disagree

**5. Which of these *Financial Attitude* statements *best* describes you? Choose only one.**

- ☐ Just when I think I have a handle on my finances, something always happens that sets me back from my financial goals.
- ☐ I am disciplined at saving.
- ☐ I am willing to take substantial financial risk for substantial gain.
- ☐ I frequently spend money when I do not plan to buy anything.
- ☐ I pay off my credit cards every month.
- ☐ I always research and plan for a big purchase.
- ☐ I am not willing to take any financial risks, no matter what the gain.
- ☐ I enjoy financial planning.

**6. Which of these *Financial Planning* statements *best* describes you? Choose only one.**

- ☐ I think anyone can have a comfortable lifestyle, if they just plan and save.
- ☐ I feel it is pointless to plan for the future because it is too far away to know what I will need.
- ☐ If I just save some money each month, I will be fine in the future.
- ☐ I think preparing for the future takes too much time and effort.
- ☐ I am more of a saver than an investor.

**7. Please respond to each of the following statements using these response categories:**

**1 = Exactly true   2 = Moderately true   3 = Hardly true   4 = Not at all true**

1. I can always manage to solve difficult problems if I try hard enough.
2. It is hard to stick to my spending plan when unexpected expenses arise.
3. It is challenging to make progress toward my financial goals.
4. When unexpected expenses occur I usually have to use credit.
5. I am confident that I could deal efficiently with unexpected events.
6. When faced with a financial challenge, I have a hard time figuring out a solution.
7. I lack confidence in my ability to manage my finances.

8. I can solve most problems if I invest the necessary effort.
9. I believe the way I manage my money will affect my future.
10. I can remain calm when facing difficulties because I can rely on my coping abilities.
11. I feel confident about making decisions that deal with money.
12. My financial situation depends on my comparison of the situation.

**Thank you for participating in this evaluation. Your responses will help us evaluate the Division of Securities Investor Education classes.**

**Is there anything else you would like to tell us about the Investor Education Seminar or your concerns about investing? Please use this space for any additional comments or suggestions.**